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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,497	06/29/2004	Egon Hubel	B-7193	4529

7590 08/07/2007
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EXAMINER

NICHOLSON III, LESLIE AUGUST

ART UNIT	PAPER NUMBER
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3651

MAIL DATE	DELIVERY MODE
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08/07/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/500,497

Applicant(s)

HUBEL, EGON

Examiner

Leslie A. Nicholson III

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 7/30/2007 have been considered.

Applicant argues the device of Beaudreau and the teaching of Pender do not disclose a device for transporting printed circuit boards or foils in conveyORIZED lines for wet-processing printed circuit boards and printed circuit foils.

In response to applicant's arguments, regarding claims 1-4,6-13,15-21, the recitation "for transporting printed circuit boards or foils in conveyORIZED lines for wet-processing printed circuit boards and printed circuit foils" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Regarding claim 14, Pender teaches the steps of providing printed circuit boards or printed circuit foils, and processing said printed circuit boards or printed circuit foils which are being transported with at least one pair of rollers by applying a wet-chemical treatment to said printed circuit boards or printed circuit foils as shown in at least the abstract and C4/L23,24 (see ¶3).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4,6-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beaudreau USP 5,622,363 in view of Pender USP 5,501,735.

Beaudreau discloses a device and method for transporting printed circuit boards or foils (C1/L9-16) comprising:

- at least one pair of rollers (118,120) that are disposed on a respective side of the plane of transportation and are facing each other, said rollers having at least one elevation (144,146) encircling said rollers, wherein said at least one pair of rollers includes at least one first roller located on one side of the plane of transportation and at least one second roller located on the other side of the plane of transportation (fig.3,4)
- transport drives associated with said rollers, wherein the elevations on the first roller of a pair of rollers located on one side of the plane of transportation are staggered relative to the elevations provided on the second roller of the pair of rollers on the other side of the plane of transportation. (fig.3)
- wherein said elevations are located along the plane of transportation in the region of the conveying path (fig.3,4)
- wherein the elevations annularly or helically encircle the rollers (fig.3,4)

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- wherein several axially spaced apart elevations are provided on the at least one roller (fig.2)
- wherein the spacing between the elevations annularly encircling the rollers or the spacings between respective turns of the elevations helically encircling the rollers are at least 10% greater than the width of the elevations (fig.1,2)
- wherein the elevations have rounded front sides (fig.3)
- wherein the rollers are made from at least one material selected from the group comprising metal, plastic material and ceramics (C5/L24-29)
- wherein the rollers provided with the elevations are configured to be formed by axles with rings secured thereon (fig.2)
- spaced apart bearings (fig.2)

Beaudreau does not expressly disclose bordering elevations at the end of the rollers annularly encircling the respective one of the rollers and facing each other and are located outside of a useful area of a conveying path in the processing line and does not expressly disclose the steps of providing printed circuit boards or printed circuit foils and processing said printed circuit boards or printed circuit foils which are being transported with at least one pair of rollers by applying a wet-chemical treatment to said printed circuit boards or printed circuit foils.

Pender teaches the use of bordering elevations (70,71,72,28) at the end of the rollers annularly encircling the respective one of the rollers and facing each other and are located outside of a useful area of a conveying path in the processing line (fig.2) for the purpose of simplifying the drive for the roller pair (C4/L45-65).

At the time of invention it would have been obvious to one having ordinary skill in the art to employ bordering elevations at the end of the rollers annularly encircling the respective one of the rollers and facing each other and are located outside of a useful area of a conveying path in the processing line, as taught by Pender, in the device (or method) of Beaudreau, for the purpose of simplifying the drive for the roller pair.

Pender teaches the steps of providing printed circuit boards or printed circuit foils, and processing said printed circuit boards or printed circuit foils which are being transported with at least one pair of rollers by applying a wet-chemical treatment to said printed circuit boards or printed circuit foils for the purpose of etching the circuit boards or printed circuit foils (at least abstract, C1/L8-14, C4/L23,24).

At the time of invention it would have been obvious to one having ordinary skill in the art to provide printed circuit boards or printed circuit foils, and process said printed circuit boards or printed circuit foils which are being transported with at least one pair of rollers by applying a wet-chemical treatment to said printed circuit boards or printed circuit foils, as taught by Pender, in the device or method of Beaudreau, for the purpose of etching the circuit boards or printed circuit foils.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leslie A. Nicholson III whose telephone number is 571-272-5487. The examiner can normally be reached on M-F, 8:30 AM - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Crawford can be reached on 571-272-6911. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

L.N.
8/3/2007



GENE O. CRAWFORD
SUPERVISORY PATENT EXAMINER